



Product Datasheet MHT2867

PowerProtect PE RT Red

General

Emtelle PowerProtect PE RT ducts are suitable for high-voltage cable production. The ducts are made of PE RT (Raised Temperature) material which can withstand higher temperature than traditional PE cable protection ducts. The ducts are manufactured and have mechanical performance according to DIN8074/DIN EN12201/DIN16834 Emtelle PowerProtect PE RT ducts are smooth in- and outside and suitable for Fusion-Butt-Welding.

Raw Materials

Material Modified PE RT Type 2 ISO 22391-2 MRS 10 DIN EN ISO 9080 raw materials are used

Dimensions PowerProtect RT SDR17 RED

Product Code	Product Description	Supply Length	Metre / Frame
300000-12	110x6,6mm PowerProtect RT SDR17, 12m	12m	576m
300001-12	125x7,4mm PowerProtect RT SDR17, 12m	12m	408m
300002-12	140x8,3mm PowerProtect RT SDR17, 12m	12m	312m
300003-12	160x9,5mm PowerProtect RT SDR17, 12m	12m	240m
300004-12	180x10,7mm PowerProtect RT SDR17, 12m	12m	204m
300005-12	200x11,9mm PowerProtect RT SDR17, 12m	12m	168m
300006-12	225x13,4mm PowerProtect RT SDR17, 12m	12m	168m
300007-12	250x14,8mm PowerProtect RT SDR17, 12m	12m	84m
300008-12	280x16,6mm PowerProtect RT SDR17, 12m	12m	48m
300009-12	315x18,7mm PowerProtect RT SDR17, 12m	12m	36m
300010-12	355x21,1mm PowerProtect RT SDR17, 12 m	12m	36m
300011-12	400x23,7mm PowerProtect RT SDR17, 12m	12m	36m
300012-12	450x26,7mm PowerProtect RT SDR17, 12m	12m	24m
300013-12	500x29,7mm PowerProtect RT SDR17, 12m	12m	24m
300014-12	560x33,2mm PowerProtect RT SDR17, 12m	12m	24m
300015-12	630x37,4mm PowerProtect RT SDR17, 12m	12m	12m
300016-12	710x42,1mm PowerProtect RT SDR17, 12m	12m	12m
300017-12	800x47,4mm PowerProtect RT SDR17, 12m	12m	12m

Other supply lengths available on request

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Dimensions PowerProtect RT SDR11 RED

Product Code	Product Description	Supply Length	Metre / Frame
TBC	50x4,6mm PowerProtect RT SDR11, 1000m	1000m	N/A
300018-12	110x10mm PowerProtect RT SDR11, 12m	12m	576m
300019-12	125x11,4mm PowerProtect RT SDR11, 12m	12m	408m
300020-12	140x12,7mm PowerProtect RT SDR11, 12m	12m	312m
300021-12	160x14,6mm PowerProtect RT SDR11, 12m	12m	240m
300022-12	180x16,4mm PowerProtect RT SDR11, 12m	12m	204m
300023-12	200x18,2mm PowerProtect RT SDR11, 12m	12m	168m
300024-12	225x20,5mm PowerProtect RT SDR11, 12m	12m	168m
300025-12	250x22,7mm PowerProtect RT SDR11, 12m	12m	84m
300026-12	280x25,4mm PowerProtect RT SDR11, 12m	12m	48m
300027-12	315x28,6mm PowerProtect RT SDR11, 12m	12m	36m
300028-12	355x32,2mm PowerProtect RT SDR11, 12m	12m	36m
300029-12	400x36,3mm PowerProtect RT SDR11, 12m	12m	36m
300030-12	450x40,9mm PowerProtect RT SDR11, 12m	12m	24m
300031-12	500x45,4mm PowerProtect RT SDR11, 12m	12m	24m
300032-12	560x50,8mm PowerProtect RT SDR11, 12m	12m	24m
300033-12	630x57,2mm PowerProtect RT SDR11, 12m	12m	12m

Other supply lengths available on request

Pipe Performance

Physical Properties:

Test	Standard	Result
Hydrostatic test 165 h	DIN EN 12201	OK
Expanded hydrostatic tests	DIN 16833	OK
High temperature life expectancy (70°C)	DIN 24033	>50 years
Impact test 5kg	DS EN 61386	OK
Elongation at Break	EN ISO 6259	>350%
Yield Stress	EN ISO 6259	>22MPa
Compression	DS EN 61386	>750N
Ring stiffness	ISO 9969	See tables below
Longitudinal reversion	EN ISO 2505	<3%
MFR (190°C/5kg)		
Deviation raw mat. To pipe: ≤ 20%	EN ISO 1133	OK
OIT ≥ 20 min	ISO 11357	OK

The pipes shall have dimensions (mm) as defined above, in addition other non-standard dimensions can be chosen,

The weight (mass) of the pipe shall be nominally calculated for 1m pipe

$$(OD - wt) \times wt \times \pi \times density$$

Where: OD (outside diameter) and wt (wall thickness) is in mm, and density for PE RT Type 2 is 0.96 g/cm³.

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SDR 17												
OD [mm]	WT [mm]	ID [mm]	ODmin [mm]	ODmax [mm]	Ovality	WTmin [mm]	WTmax [mm]	Weight [kg/m]	Min Bend Radius [mm] @ 20 °C	Ring Stiffness SN {kN/m ² }	Max Install tension [kN] @ 20 °C	Max Install tension [kg] @ 20 °C
110	6,6	96,8	110,0	110,7	2,2	6,6	7,4	2,06	2.200	16	22,64	2.305,51
125	7,4	110,2	125,0	125,8	2,5	7,4	8,3	2,62	2.500	16	28,87	2.939,96
140	8,3	123,4	140,0	140,9	2,8	8,3	9,3	3,30	2.800	16	36,26	3.692,89
160	9,5	141,0	160,0	161,0	3,2	9,5	10,6	4,31	3.200	16	47,43	4.830,17
180	10,7	158,6	180,0	181,1	3,6	10,7	11,9	5,46	3.600	16	60,10	6.119,88
200	11,9	176,2	200,0	201,2	4,0	11,9	13,2	6,75	4.000	16	74,26	7.562,02
225	13,4	198,2	225,0	226,4	4,5	13,4	14,9	8,55	4.500	16	94,07	9.579,06
250	14,8	220,4	250,0	251,5	5,0	14,8	16,4	10,50	5.000	16	115,48	11.759,84
280	16,6	246,8	280,0	281,7	5,0	16,6	18,4	13,19	5.600	16	145,06	14.771,55
315	18,7	277,6	315,0	316,9	5,0	18,7	20,7	16,71	6.300	16	183,82	18.718,69
355	21,1	312,8	355,0	357,2	6,0	21,1	23,4	21,25	7.100	16	233,73	23.801,33
400	23,7	352,6	400,0	402,4	7,0	23,7	26,2	26,90	8.000	16	295,87	30.129,01
450	26,7	396,6	450,0	452,7	8,0	26,7	29,5	34,09	9.000	16	374,95	38.182,28
500	29,7	440,6	500,0	503,0	8,0	29,7	32,8	42,13	10.000	16	463,39	47.188,23
560	33,2	493,6	560,0	563,4	8,0	33,2	36,7	52,75	11.200	16	580,23	59.086,21
630	37,4	555,2	630,0	633,8	9,0	37,4	41,3	66,84	12.600	16	735,27	74.874,78
710	42,1	625,8	710,0	716,4	9,0	42,1	46,5	84,80	14.200	16	932,84	94.993,93
800	47,4	705,2	800,0	807,2	10,0	47,4	52,3	107,59	16.000	16	1.183,47	120.516,04

*Note that “,” separates for decimals and “.” separates for thousands

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SDR 11												
OD [mm]	WT [mm]	ID [mm]	ODmin [mm]	ODmax [mm]	Ovality	WTmin [mm]	WTmax [mm]	Weight [kg/m]	Min Bend Radius [mm] @ 20 ° C	Ring Stiffness SN {kN/m ² }	Max Install tension [kN] @ 20 ° C	Max Install tension [kg] @ 20 ° C
50	4,6	40,8	50,0	50,4	1,4	4,6	5,2	0,63	1.000	64	6,93	705,53
110	10,0	90,0	110,0	110,7	2,2	10,0	11,1	3,02	2.200	64	33,18	3.378,33
125	11,4	102,2	125,0	125,8	2,5	11,4	12,7	3,91	2.500	64	42,96	4.375,07
140	12,7	114,6	140,0	140,9	2,8	12,7	14,1	4,88	2.800	64	53,63	5.461,78
160	14,6	130,8	160,0	161,0	3,2	14,6	16,2	6,40	3.200	64	70,43	7.171,66
180	16,4	147,2	180,0	181,1	3,6	16,4	18,2	8,09	3.600	64	89,01	9.064,20
200	18,2	163,6	200,0	201,2	4,0	18,2	20,2	9,98	4.000	64	109,77	11.178,09
225	20,5	184,0	225,0	226,4	4,5	20,5	22,7	12,64	4.500	64	139,08	14.162,81
250	22,7	204,6	250,0	251,5	5,0	22,7	25,1	15,56	5.000	64	171,17	17.431,21
280	25,4	229,2	280,0	281,7	5,0	25,4	28,1	19,50	5.600	64	214,54	21.847,13
315	28,6	257,8	315,0	316,9	5,0	28,6	31,6	24,70	6.300	64	271,74	27.672,05
355	32,2	290,6	355,0	357,2	6,0	32,2	35,6	31,35	7.100	64	344,83	35.114,92
400	36,3	327,4	400,0	402,4	7,0	36,3	40,1	39,82	8.000	64	437,99	44.601,78
450	40,9	368,2	450,0	452,7	8,0	40,9	45,1	50,46	9.000	64	555,09	56.526,89
500	45,4	409,2	500,0	503,0	8,0	45,4	50,1	62,25	10.000	64	684,70	69.724,85
560	50,8	458,4	560,0	563,4	8,0	50,8	56,0	78,01	11.200	64	858,16	87.388,53
630	57,2	515,6	630,0	633,8	9,0	57,2	63,1	98,81	12.600	64	1.086,96	110.688,20

*Note that “,” separates for decimals and “.” separates for thousands

Exposure:

The pipe shall be UV stabilised to withstand daylight exposure period of at least 12 months.

However, for optimum performance, the pipe is best stored for no longer than 6 months if outdoors.

Marking on duct every meter:

EMTELLE POWERPROTECT PE-RT ODxWTmm SDR-value “DD.MM.YYYY HH:MM” “Lot. No.”

Environmental considerations: Can be disposed to recycling.

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